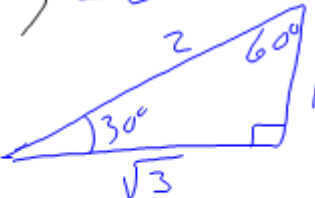


a) $\tan^{-1}\left(\frac{\sqrt{3}}{1}\right) = 60^\circ$



b) $\tan^{-1}\left(\frac{\sqrt{3}}{3}\right) = 30^\circ$

c) $\sin^{-1}\left(\frac{1}{2}\right) = 30^\circ$

d) $\cos^{-1}\left(\frac{1}{2}\right) = 60^\circ$

e) $\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) = 60^\circ$

f) $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right) = 30^\circ$

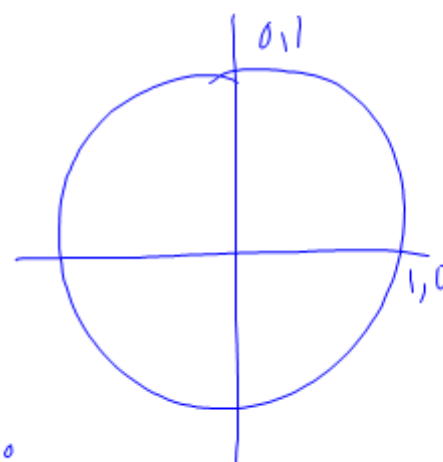
g) $\sin^{-1}(1) = 90^\circ$

h) $\sin^{-1}(0) = 0^\circ$

i) $\cos^{-1}(1) = 0^\circ$

j) $\cos^{-1}(0) = 90^\circ$

Do
NOT USE
UNIT CIRCLE
OR CALC.
OR NOTES,
USE TRIANGLES



$$y = \cos(2x) \quad \text{solve for } x$$

$\cos^{-1} \quad \cos^{-1}$

$$\frac{\cos^{-1}(y)}{2} = \frac{2x}{2}$$

$$\frac{1}{2} \cos^{-1}(y) = x$$

$$\frac{2 \sin^{-1}(x)}{2} = \frac{\pi}{2}$$

$$\sin^{-1}(x) = \frac{\pi}{2}$$

$$x = \sin\left(\frac{\pi}{2}\right)$$

$$x = 1$$

$$\cos^{-1}(x) = \sin^{-1}\left(\frac{1}{2}\right)$$

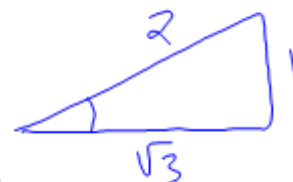
$$\underset{\cos}{\cos^{-1}(x)} = \underset{\cos}{30^\circ}$$

$$x = \cos(30^\circ)$$

$$x = \frac{\sqrt{3}}{2}$$

$$\cancel{\cos} \cos^{-1}(x) = \sin^{-1}\left(\frac{1}{2}\right)$$

$$x = \cos\left(\underbrace{\sin^{-1}\left(\frac{1}{2}\right)}_{\substack{\text{angle} \\ \text{triangle}}}\right)$$



$$x = \frac{\sqrt{3}}{2}$$

Sec 6.4

#5, 11, 13, 23-30

$$\frac{3}{4} \cdot \frac{4}{3} \cos^{-1}\left(\frac{y}{4}\right) = \pi$$

$$\cos^{-1}\left(\frac{y}{4}\right) = \frac{3\pi}{4}$$

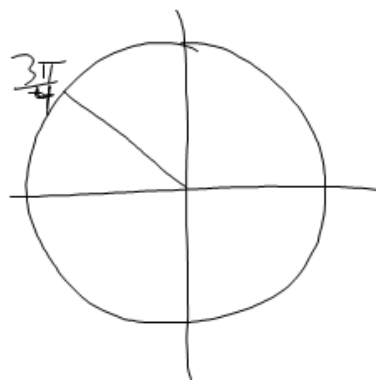
\cos

$$\frac{y}{4} = \cos\left(\frac{3\pi}{4}\right)$$

$$y = 4 \cos\left(\frac{3\pi}{4}\right)$$

$$y = 4 \cdot \frac{-\sqrt{2}}{2} = -2\sqrt{2}$$

$y = -2\sqrt{2}$



(27)

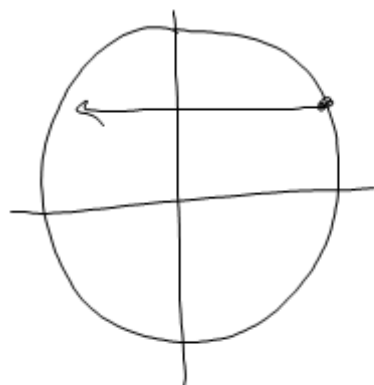
$$\arcsin x = \tan^{-1}\left(\frac{3}{4}\right)$$

$$x = \sin\left(\tan^{-1}\left(\frac{3}{4}\right)\right)$$

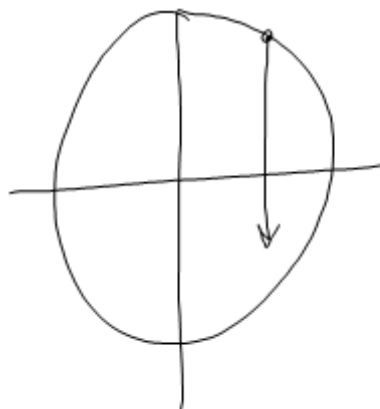


$$x = \frac{3}{5}$$

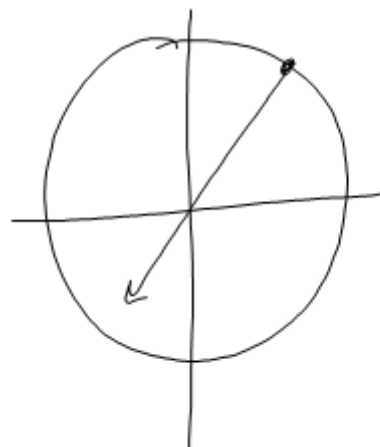
csc.
sin



sec.
cos



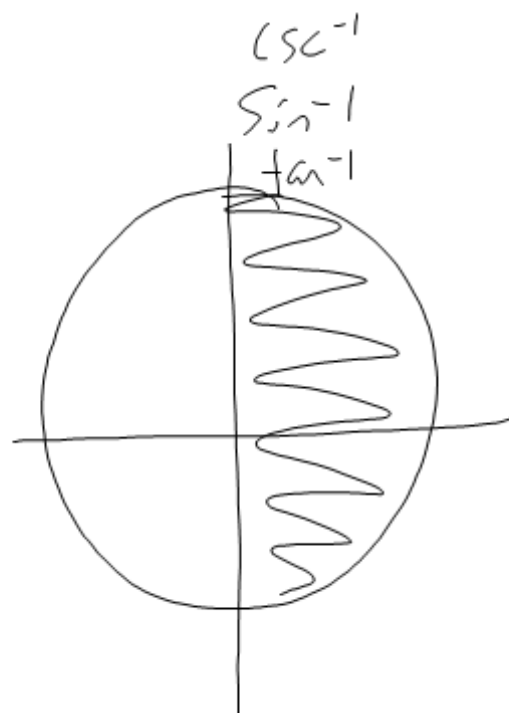
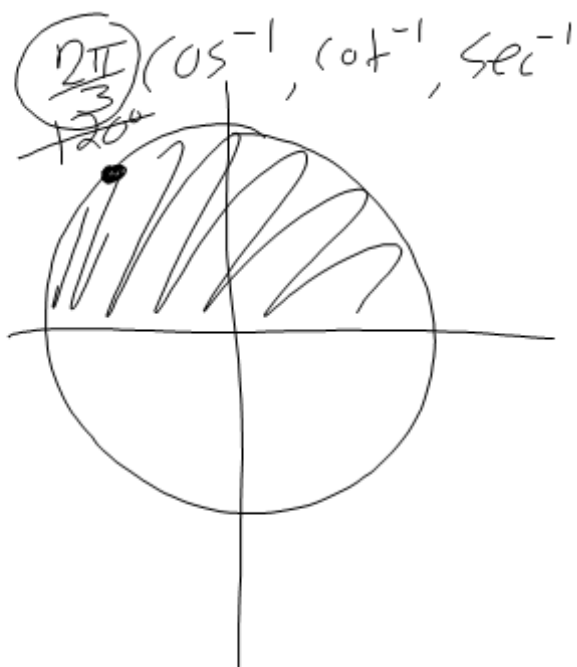
cot.
tan



HW

p 271

3, 5-13, 14-16, 17, 20-31



$$\sin\left(\frac{11\pi}{6}\right) = -\frac{1}{2}$$

$$\sin^{-1}\left(-\frac{1}{2}\right) = \frac{11\pi}{6}?$$

No

Ans. $-\frac{\pi}{6}$